

COCHRANE-REVIEW

Opdaterede retningslinjer for antibiotikaprofylakse

De danske anbefalinger vedr. antibiotisk profylakse ved tandbehandling til forebyggelse af infektiøs endocarditis er netop revideret – de lægger sig tæt op ad de amerikanske

Winnie Brodam

Et opdateret Cochrane-review har ikke fundet evidens for, at antibiotika virker profylaktisk imod bakteriel endocarditis. Det har heller ikke fundet evidens for, at det ikke virker, og det er uklart, om de positive virkninger ved at administrere antibiotika overvejer de potentielt skadelige.

Kun ét studie opfyldte i dette tilfælde Cochranes strenge kvalitetskrav. Det pågældende studie er et case-kontrol-studie, som omfatter alle kendte hollandske tilfælde af endocarditis over to år. Blandt dem fandt man, at penicillinprofylakse ikke havde ændret hyppigheden af endocarditis-forekomst.

Kommentar af lektor Tove Larsen, Tandlægeskolen i København:

– Anbefalingerne for forebyggelse af infektiøs endocarditis (IE) i forbindelse med tandlægelige indgreb har været til debat internationalt i en årrække, og vejledningerne for antibiotisk profylakse er løbende blevet revideret.

Baggrunden for diskussionerne er især, at det er vanskeligt at skabe evidens for effekten af profylaktiske tiltag, da en prospektiv placebokontrolleret undersøgelse vil kræve inklusion af min. 6.000 patienter og derfor næppe vil blive gennemført. Dette illustreres af, at kun et enkelt studie møder inklusionskriterierne i det nye Cochrane-review.

Det diskuteres, om effekten af den antibiotiske profylakse opvejer de potentielt skadelige virkninger af administrationen. Desuden fokuseres der på, at IE også kan opstå som følge af bakteriami med orale streptokokker – der stadig er blandt de hovedansvarlige for IE – opstået efter daglige procedurer som tandbørstning og tygning. Det er påvist, at dette især forekommer hos patienter med marginal parodontitis. Derfor er det ekstra vigtigt at sikre sunde parodontale forhold hos patienter i risiko for udvikling af IE.

Cochrane-reviewet omtaler, at det engelske National Institute for Health and Clinical Excellence er gået bort fra at anbefale antibiotisk profylakse ved tandbehandling til forebyggelse af IE (2008). I modsætning hertil anbefaler American Heart Association (2008) fortsat administration af antibiotika, om end på indskrænket indikation. Her fremhæves dog også, at opretholdelse af en god mundhygiejne og sunde forhold i mundhulen er vigtigere i forhold til at forebygge IE.

De danske anbefalinger er senest revideret i april 2009 og lægger sig tæt op ad de amerikanske. De kan findes på Dansk Cardiologisk Selskabs hjemmeside, www.cardio.dk.

Endocarditis-profylakse gives kun ved tandindgreb med risiko for blødning til patienter med særlig høj risiko for endocarditis:

- Tidligere endocarditis
- Hjerteklappoteser
- Visse medfødte hjertesygdomme (CHD)
 - ikke korrigerede cyanotiske CHD, herunder palliative shunts og "conduits"
 - de første seks mdr. efter vellykket behandling (kirurgisk/device) af medfødte defekter i hjertet, hvor der er indsat protesemateriale
 - ikke komplet korrigeret CHD, hvor der resterer utæthed i umiddelbar nærhed af indsat protesemateriale
- Organtransplanterede patienter med hjerteklapsygdom.

Antibiotikaprofylaksen består af Amoxicillin 2 g (børn 50 mg/kg), 1 time før indgrebet. Ved penicillinallergi gives Roxithromycin 300 mg (børn 150 mg) 1 time før indgrebet.

Abstract

Background

Infective endocarditis is a severe infection arising in the lining of the heart with a high mortality rate.

Many dental procedures cause bacteraemia and it was believed that this may lead to bacterial endocarditis (BE) in a few people. Guidelines in many countries have recommended that prior to invasive dental procedures antibiotics are administered to people at high risk of endocarditis. However, recent guidance by the National Institute for Health and Clinical Excellence (NICE) in England and Wales has recommended that antibiotics are not required.

Objectives

To determine whether prophylactic antibiotic administration compared to no such administration or placebo before invasive dental procedures in people at increased risk of BE influences mortality, serious illness or endocarditis incidence.

Search strategy

The search strategy from the previous review was expanded and run on MEDLINE (1950 to June 2008) and adapted for use on the Cochrane Oral Health, Heart and Infectious Diseases Groups' Trials Registers, as well as the following databases: CENTRAL (The Cochrane Library 2008, Issue 2); EMBASE (1980 to June 2008); and the *metaRegister* of Controlled Trials (to June 2008).

Selection criteria

Due to the low incidence of BE it was anticipated that few if any trials would be located. For this reason, cohort and case-control studies were included where suitably matched control or comparison groups had been studied. The intervention was the administration of antibiotic compared to no such administration before a dental procedure in people with an increased risk of BE. Cohort studies would need to follow those at increased risk and assess outcomes following any invasive dental procedures, grouping by whether prophylaxis was received. Included case-control studies would need to match people who had developed endocarditis (and who were known to be at increased risk before undergoing an invasive dental procedure preceding the onset of endocarditis) with those at similar risk but who had not developed endocarditis. Outcomes of interest were: mortality or serious adverse event requiring hospital admission; development of endocarditis following any dental procedure in a defined time period; development of endocarditis due to other non-dental causes; any recorded adverse events to the antibiotics; and cost implications of the antibiotic provision for the care of those patients who develop endocarditis.

Data collection and analysis

Two review authors independently selected studies for inclusion, then assessed quality and extracted data from the included study.

Main results

No randomised controlled trials (RCTs), controlled clinical trials (CCTs) or cohort studies were included. One case-control study met the inclusion criteria. It collected all the cases of endocarditis in The Netherlands over 2 years, finding a total of 24 people who developed endocarditis within 180 days of an invasive dental procedure, definitely requiring prophylaxis according to current guidelines and who were at increased risk of endocarditis due to a pre-existing cardiac problem. This study included participants who died because of the endocarditis (using proxies). Controls attended local cardiology outpatient clinics for similar cardiac problems, had undergone an invasive dental procedure within the past 180 days and were matched by age with the cases. No significant effect of penicillin prophylaxis on the incidence of endocarditis could be seen. No data were found on other outcomes.

Authors' conclusions

There remains no evidence about whether penicillin prophylaxis is effective or ineffective against bacterial endocarditis in people at risk who are about to undergo an invasive dental procedure. There is a lack of evidence to support previously published guidelines in this area. It is not clear whether the potential harms and costs of antibiotic administration outweigh any beneficial effect. Ethically practitioners need to discuss the potential benefits and harms of antibiotic prophylaxis with their patients before a decision is made about administration.

Oliver R, Roberts GJ, Hooper L, Worthington HV. Antibiotics for the prophylaxis of bacterial endocarditis in dentistry. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD003813. DOI: 10.1002/14651858.CD003813.pub3.